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(54) Title: COMPOSITIONS AND METHODS FOR siRNA INHIBITION OF HIF-1 ALPHA

(57) Abstract: RNA interference using small interfering RNAs which target HIF-1 alpha mRNA inhibit expression of the HIF-1 alpha gene. As HIF-1 alpha is a transcriptional regulator of VEGF, expression of VEGF is also inhibited. Control of VEGF production through siRNA-mediated down-regulation of HIF-1 alpha can be used to inhibit angiogenesis, in particularly in diseases such as diabetic retinopathy, age related macular degeneration and many types of cancer.

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/34826

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C07H 21/04; A61K 48/00; C12N 15/00

US CL : 435/375; 536/24.5; 514/44

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/375; 536/24.5; 514/44

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
WEST, MEDLINE, BIOSIS, CAPLUS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	SUN et al. Gene Transfer of Antisense Hypoxia Inducible Factor-1 alpha Enhances the Therapeutic Efficacy of Cancer Immunotherapy. Gene Therapy. 2001, Vol. 8, pages 638-645, see entire document.	1-77
Y	KANG et al. An Antisense Oligonucleotide That Inhibits the Expression of Hypoxia-Inducible Factor-1 alpha Alters Hypoxia-Induced Changes in Proliferation and Viability of Human Cardiac Fibroblasts., page II.57, see abstract.	1-77
Y,P	HOEG et al. In vitro and in vivo Efficacy of a HIF-1alpha-Antisense Oligonucleotide Containing Locked Nucleic Acids. ECJ Supplements. September 2003, pages S212-S213, see entire abstract.	1-77

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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